

HOUSTON COMMUNITY COLLEGE CENTRAL ADMINISTRATION BUILDING

3100 MAIN STREET, HOUSTON, TX 77002

AHU VFD AND CONTROL SYSTEM REPLACEMENT

100% CONSTRUCTION DRAWINGS
JUNE 24, 2016

Table of Contents
T1 - Cover Sheet and Table of Contents
CA1 - AHU VFD Replacement Plan
CA2 - Control System Replacement Plan

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HOUSTON COMMUNITY COLLEGE
CENTRAL ADMINISTRATION
AHU VFD AND CONTROL SYSTEM
REPLACEMENT

COVER SHEET



DATE
June 24
2016

REVISIONS		
NO.	REV.	DATE
SD	CC	12-15
95% CD	CC / BC	4-25-16
100% CD	CC / BC	6-24-16

SCALE:
As noted

SHEET INFO.

T-1



NOTE: PROJECT IS FUNDED THROUGH A PROGRAM SPONSORED BY THE AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA). CONTRACTOR WILL BE REQUIRED TO CERTIFY THAT ALL EQUIPMENT SUPPLIED IN THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF "BUY AMERICAN CERTIFICATION" AND WAS MANUFACTURED IN THE UNITED STATES. CONTRACTOR WILL ALSO BE RESPONSIBLE TO COMPLETE DEPARTMENT OF LABOR FORM WH347 AND WAGES PAID WILL BE FILED AS CERTIFIED PAYROLLS AND COMPLY WITH THE DAVIS BACON ACT.



PHOTO: VFD FOR AHU-2 TO BE REPLACED

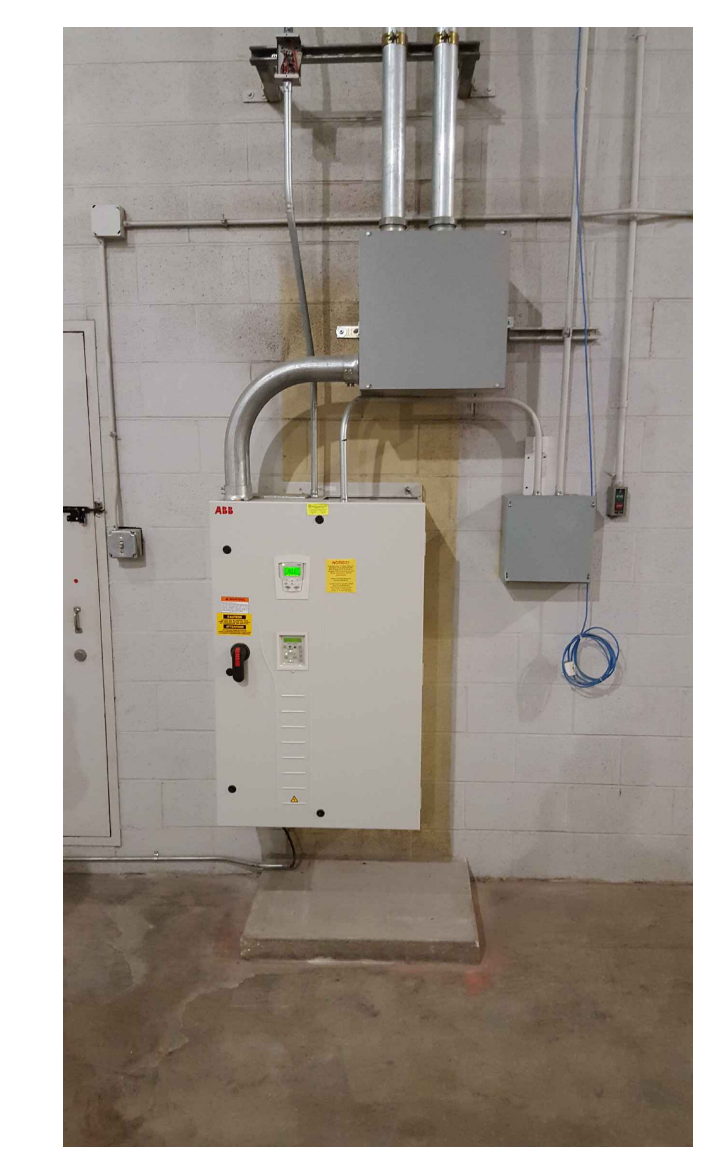


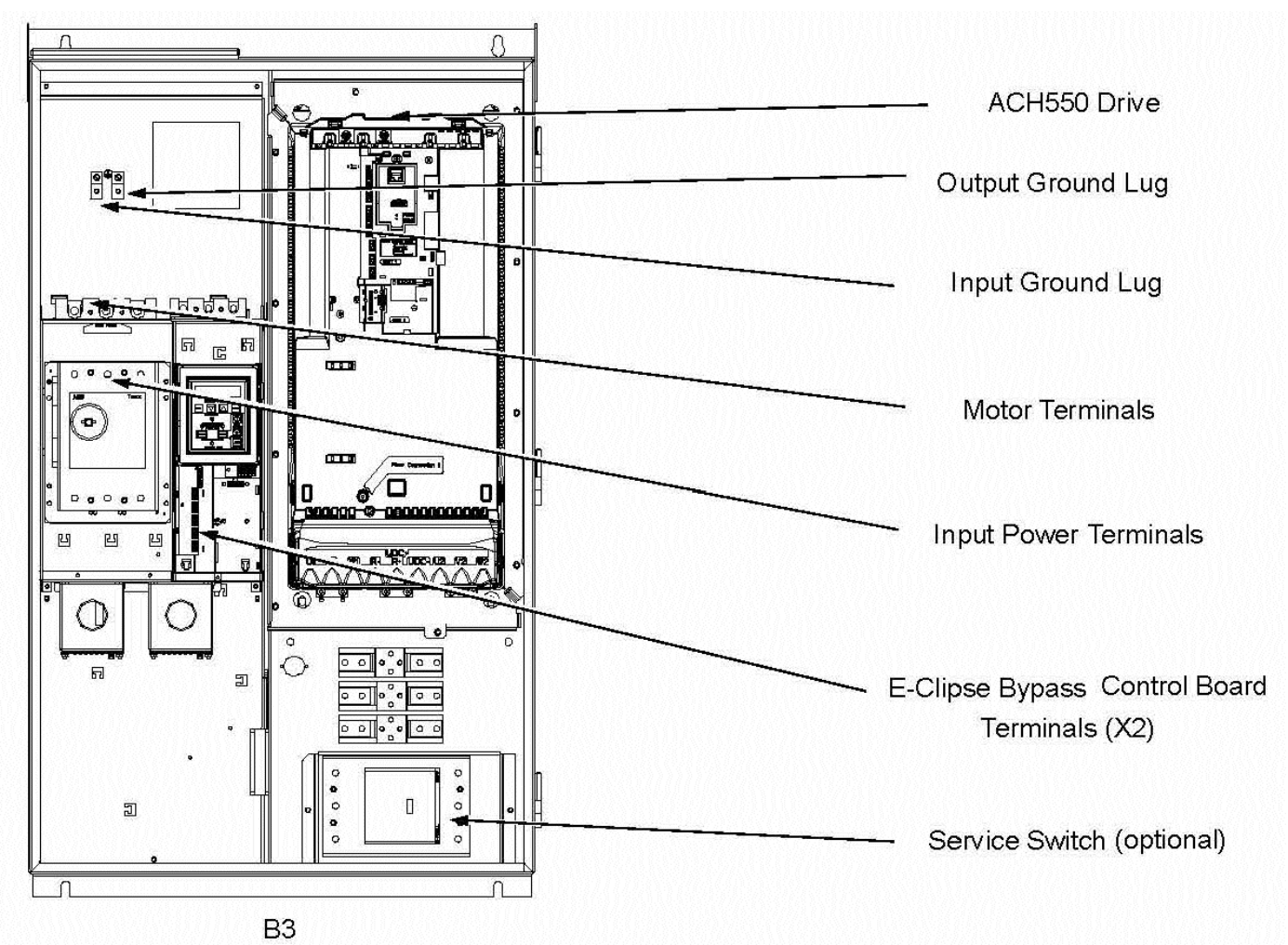
PHOTO: VFD FOR AHU-1 TO REMAIN

A AIR HANDLER MOTOR AND VFD REPLACEMENT PLAN
SCALE: 1/16"=1'-0"

- REPLACEMENT PLAN KEYED NOTES:
- 1 REPLACE EXISTING VFD FOR AHUS 2&3 PER SCHEDULE
 - 2 EXISTING STATIC PRESSURE SENSOR LOCATED 1/4 DOWN EXISTING DUCT TO REMAIN.

EXISTING AND NEW VARIABLE FREQUENCY DRIVE SCHEDULE					
DRIVE	MAKE	MODEL	MOTOR POWER hp	ENCLOSURE DESIGNATION	ELECTRICAL
EXISTING	CUTLER-HAMMER	HV9000	125	N/A	460V / 3 Ph
NEW	ABB E-CLIPSE BYPASS	ACH550-BCR-157A-4	125	B3	460V / 3 Ph

- VFD REPLACEMENT NOTES:
- NEW VFD TO BE INSTALLED IN SAME LOCATION AS EXISTING DRIVE. NEW DRIVE WILL BE SIGNIFICANTLY SMALLER THAN EXISTING DRIVE. WALL ANCHOR LOCATIONS WILL HAVE TO BE ADJUSTED.
 - EXISTING VFD CIRCUIT AND COMMUNICATION CONDUIT CONNECTIONS ARE TOP FEED. CONTRACTOR WILL USE TERMINAL BLOCKS TO EXTEND EXISTING POWER AND COMMUNICATION CIRCUITS DOWN TO NEW DRIVE INSTALLATION AS PICTURED IN THE DETAIL THIS DRAWING.



IF ELECTRICAL CIRCUITS NEED TO BE EXTENDED, CONTRACTOR TO SUPPLY AND INSTALL SQUARE D TERMINAL BLOCK, MODEL GE6 (ONE PER CIRCUIT CONDUCTOR, FROM #6 THROUGH 250KCMIL) WITH MANUFACTURER DIN 3 35MM MOUNTING TRACK, SQUARE D MH106 GALVANIZED STEEL, PRE-PUNCHED MOUNTING HOLES, OR ENGINEER APPROVED EQUAL. SECURE IN BOTTOM OF 12x12x6 NEMA 1 ENCLOSURE (WIEGMANN SC121206RC) TO BE MOUNTED ON EXISTING WALL IN LINE WITH EXISTING CONDUIT. TERMINATE EXISTING CONDUCTORS AND SUPPLY AND INSTALL NEW CONDUCTORS MATCHING CAPACITY AND INSULATION TYPE AS EXISTING CONDUCTORS, TO EQUIPMENT IN MATCHING SIZE CONDUIT. TORQUE ALL CONNECTIONS AT TERMINAL BOX TO MANUFACTURER RECOMMENDED TORQUE.

B ELECTRICAL CIRCUIT EXTENSION DETAIL
NO SCALE



PHOTO: VFD FOR AHU-4 (TO REMAIN) AND AHU-3 TO BE REPLACED

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AHU VFD REPLACEMENT
PLAN



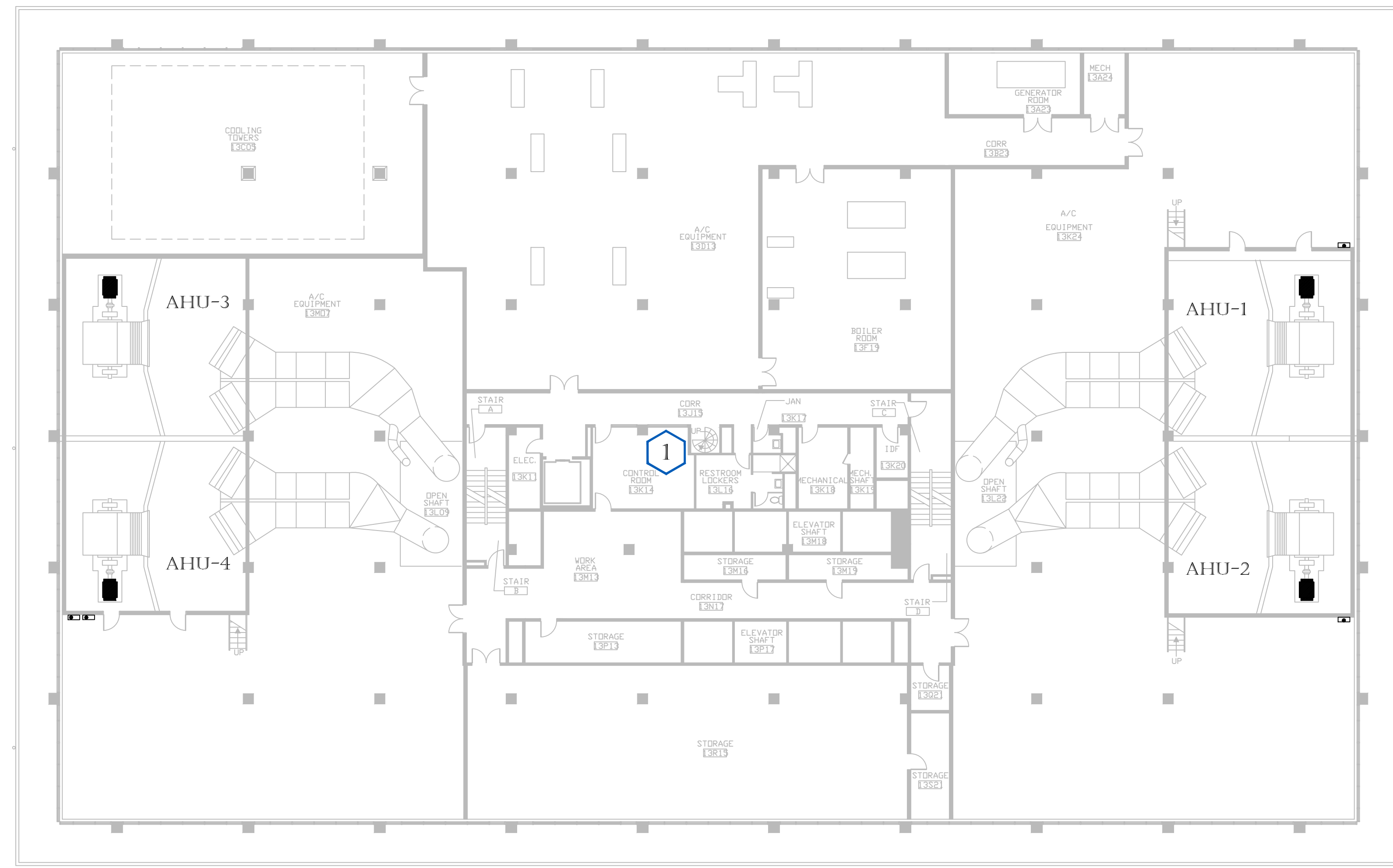
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CA-1



A BUILDING ENERGY CONTROL SYSTEM REPLACEMENT PLAN
SCALE: 1/16"=1'-0"

REPLACEMENT PLAN KEYED NOTES:

- 1 REPLACE EXISTING CONTINUUM MASTERS WITH STRUXTUREWARE MASTERS (AS)

SCOPE OF WORK CONTROL SYSTEM RENOVATION:

1. Contractor to replace 8 EACH Continuum Masters with Struxtureware Masters (AS)
2. System upgrade to include Struxtureware workstation license key and computer hardware.
3. Contractor to provide enterprise server software and computer hardware (allows access to multiple Struxtureware sites/masters).
4. Contractor to move Ininet network from old masters to new Struxtureware (513 Ininet controllers).
5. Contractor to convert existing database to Struxtureware format.
6. Contractor to re-draw and animate 540 graphics for 3100 main street building, including equipment graphics and floor plans.
7. Contractor to re-create schedules, historical trends and alarm links.
8. Struxtureware shall be accessible via Internet Explorer or workstation.

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CONTROL SYSTEM
REPLACEMENT PLAN



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